Commonwealth of Kentucky
Division for Air Quality

REVISED PERMIT STATEMENT OF BASIS

Conditional Major Draft Permit No. F-06-070
FINAL
TYSON FOODS, INC.
ROBARDS, KY 40452
April 2, 2007
ESMAIL HASSANPOUR, REVIEWER

SOURCE ID #:	21-101-00120
SOURCE AI #:	45238
ACTIVITY ID #:	APE20050001

SOURCE DESCRIPTION:

Tyson Foods Inc, applied to the Kentucky Division for Air Quality for a new source wide Conditional Major permit and installation of a new Rendering Crossflow Scrubber (EU 10B). The source submitted a renewal application for their operating permit (S-95-065) in 1999, but was advised to resubmit a source wide application to include all units not permitted previously. Tyson Foods, Inc. operates a poultry processing and feather protein processing facility in Robards, Kentucky. Tyson Foods, Inc. produces fresh chicken for human consumption and meat meal and feather meal as byproducts.

EMISSION UNITS**:**

01-03 (EU-01, 02, and 03) - Three Indirect heat Exchangers:
Primary Fuel: Natural Gas
Rated Capacity: 62.853 MMBtu/hr (each)
Control Device: Low NOx Burners & Flue Gas Recirculation
Constructed Date: 1996

04-05 (EU-04 and EU-05) – Two Kemco Water Heaters (RB-Wh-01, & RB-Wh-02):
Primary Fuel: Natural Gas
Rated Capacity: 21.00 MMBtu/hr (each)
Construction dates: RB-Wh-01-1996, and RB-Wh-02-2001

11 (EU-11) - Meat Steam Cookers (2) (RE-01)
Fuel type: Natural Gas

09 (EU-09) - INCINERATOR CE-01, 10.50 MMBtu/hr. 99.99 % Control Efficiency
Construction Date: 1996

06 (EU-6) – RAW Feather and Blood Processing (RE-03)
Fuel Type: Natural Gas
Control Equipment: Spray Tower, Packed Bed Scrubber. 99.9 % Control Efficiency
Construction Date: 1996

07 (EU-07) - Meat Solids and Fat (RE-02)
Control Equipment: Venturi Scrubber, Packed Bed Scrubber. 90% Control Efficiency
Construction Date: 1996

08 (EU-08) – Meat Side Cross flow Scrubber (Meat and Feather Meal Processing) (RE-04)
Control equipment: Meat Side Crossflow Scrubber (CE-04). 90% Control Efficiency
Construction Date: 1996

10A (EU-10A) - Meat Side Cross flow Scrubber (Meat and Feather Meal Processing) (RE-05)
Control Equipment: Meat Side Crossflow Scrubber (CE-05). 90% Control Efficiency
Construction Date: 1996

10B (EU-10B) – No. 3 Cross Flow Scrubber (Meat and Feather Meal Processing) (RE-07)
Control Equipment: New Rendering Crossflow Scrubber
Construction Date: 2005

12&13 (EU-12 & EU-13) - Two Salt Systems (SA- 01-SA- 02)
Control Equipment: Filter Sock (CE-07)
Construction Date: 1996

APPLICABLE REGULATIONS:

401 KAR 59:015, New indirect heat exchangers, applicable to an emissions unit with a capacity of less than 250 MMBtu/hr, which commenced on or after April 9, 1972.

401 KAR 59:010, New Process Operations applicable to each affected facility or source, which is not subjected to another emission standard with respect to particulate in this chapter, commenced on or after July 2, 1975.

401 KAR 60:005, incorporating by reference 40 CFR 60, Subpart Dc, Standard of Performance for small industrial –commercial-institutional steam generating units, applies to each steam generating unit commenced after June 9, 1989 that has a maximum design heat input capacity between 10 MMBtu/hr and 100 MMBtu/hr.

COMMENTS:

The Emissions Units 01-03 Three Indirect Heat Exchangers Were Installed in 1996:

The units have a rated fuel input capacity of 62.853 million British thermal units per hour (MMBtu/hr). The primary fuel burned for units is natural gas.

Pursuant to 401 KAR 59:015, Section 4(1) (c), particulate emissions shall not exceed 0.28 lb/MMBtu based on a three-hour average.

Pursuant to 401 KAR 59:015, Section 4(2) and 401 KAR 60:005, incorporating by reference 40 CFR 60.43c(c), emissions shall not exceed twenty (20) percent opacity based on a six-minute average

except a maximum of twenty seven (27) percent opacity (six minute average) for not more than one six (6) minute period per hour is allowed.

Pursuant to 401 KAR 59:015, Section 5(1)(c), sulfur dioxide emissions shall not exceed 0.90 lb/MMBtu based on a twenty-four-hour average.

The units are assumed to be in compliance with PM, SO_2, and opacity standards while using natural gas.

The permittee shall monitor the source wide natural gas usage on a monthly basis. The permittee shall record and maintain records of the amount of each fuel combusted by the unit on a monthly basis.

The Emission Units 04-05 Two Kemco Water Heater (RB-Wh-01, and RB-Wh-02):

RB-Wh-01 installed in 1996 and RB-Wh-02 installed in 2001. The units have a rated fuel input capacity of 21.00 million British thermal units per hour (MMBtu/hr). The primary fuel burned for units is natural gas.

Pursuant to 401 KAR 59:010, Section 3(1)(a), no person shall cause, suffer, allow, or permit any continuous emission into the open air from a control device or stack associated with any affected facility which is equal to or greater than twenty (20) percent opacity.

Pursuant to 401 KAR 59:010, Section 3(2), particulate emissions shall not exceed 2.34 lb/hr on a three hours rolling average.

Pursuant to 401 KAR 59:010, this unit is considered to be in compliance with PM and opacity standards while burning natural gas

The permittee shall monitor the natural gas usage rate on a monthly basis. The permittee shall records the amount of natural gas burned maintained on a monthly basis.

The Emission Units 06-09, 11 and 12 Installed 1996. The Emission Unit 10 Installed 2005:

Pursuant to 401 KAR 59:010, Section 3(2), particulate emissions shall not exceed 21.17 lb/hr for unit 06, 20.80 lb/hr for unit 07, 69.85 lb/hr for unit 08, 54.75 lb/hr for unit 09, 29.57 lb/hr for unit 10, 30.97 lb/hr for unit 11, and 14.96 lb/hr for unit 12 &13.

Compliance will be demonstrated from the following emission calculation basis and monitoring requirements:
PT emission in pounds per hour= (monthly processing rate in tons/month)(1 month/hours of operation that month)(emission factor) (1-control efficiency)

Pursuant to 401 KAR 52:020, Section 26, the permittee shall perform a qualitative visual observation of the opacity of emissions from each operation specified in this section on a daily basis but more often if necessary to ensure compliance. If during qualitative visible observations visible emissions from an affected facility are seen at least once each week for two consecutive weeks, then the opacity of emissions shall be determined by EPA Reference Method 9 at least once during that two-week period while the affected facility is operating at representative capacity or at a frequency requested by the Division.

Compliance with annual emissions and processing limitations shall be based on emissions and processing rates for any twelve (12) consecutive months.
In accordance with 401 KAR 52:030, source wide emissions for Carbon Monoxide (CO) and Nitrogen Oxides (NOX) shall not exceed 90 tons per year on a consecutive twelve (12) month total.

EMISSIONS AND OPERATING CAP DESCRIPTION:

The source has the potential to be a major source for Carbon Monoxide (CO) and Nitrogen Oxides (NOX) emissions. The facility has requested to be classified as a conditional major source wide with a federally enforceable limit not to exceed 90 tons per year on a consecutive twelve (12) month total. The source shall limit the natural gas usage rate to 2119 MMCF/yr for Carbon Monoxide (CO) and Nitrogen Oxides (NOX) emissions to be under 90 tons/yr. In order to be in compliance with the limit above the source shall monitor and record natural gas usage for all units on a monthly basis and consecutive twelve months rolling total.

CREDIBLE EVIDENCE:

This permit contains provisions which require that specific test methods, monitoring or recordkeeping be used as a demonstration of compliance with permit limits. On February 24, 1997, the U.S. EPA promulgated revisions to the following federal regulations: 40 CFR Part 51, Sec. 51.212; 40 CFR Part 52, Sec. 52.12; 40 CFR Part 52, Sec. 52.30; 40 CFR Part 60, Sec. 60.11 and 40 CFR Part 61, Sec. 61.12, that allow the use of credible evidence to establish compliance with applicable requirements. At the issuance of this permit, Kentucky has only adopted the provisions of 40 CFR Part 60, Sec. 60.11 and 40 CFR Part 61, Sec. 61.12 into its air quality regulations.